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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/693,522  | 10/27/2003  | Tooru Ooiwa          | 111334.01           | 2222             |
| 25944   | 7590        | 04/14/2006           | EXAMINER            |                  |
| OLIFF & BERRIDGE, PLC<br>P.O. BOX 19928<br>ALEXANDRIA, VA 22320 |             |                      | CAZAN, LIVIUS RADU  |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 3729                |                  |

DATE MAILED: 04/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                               |                              |  |
|------------------------------|-------------------------------|------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>10/693,522 | Applicant(s)<br>OOIWA, TOORU |  |
|                              | Examiner<br>Livius R. Cazan   | Art Unit<br>3729             |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 6-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 09/960,735.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>5/24/04, 10/27/03</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-5, drawn to a method of manufacturing a rotary electric machine, classified in class 29, subclass 596.

II. Claims 6-9, drawn to an alternative method of manufacturing a rotary electric machine, classified in class 29, subclass 598.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the method of manufacturing a rotary electric machine as recited in Group I does not require a rotor, as required by Group II. The subcombination, Invention II, has separate utility such as inserting the coil arrangement into the stator core and locating coils on a stator core such that there is a 180-degree electrical phase difference between the coils.

3. Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

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4. During a telephone conversation with John Fitzpatrick on 04/06/2006 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-5. Affirmation of this election must be made by applicant in replying to this Office action. Claims 6-9 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Priority***

5. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/960735, filed on 09/24/2001.

***Specification***

6. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

7. The abstract of the disclosure is objected to because it is not a concise statement of the technical disclosure. Very little information is presented in the abstract, and it should therefore be amended so as to more accurately represent the invention. Correction is required. See MPEP § 608.01(b).

8. The disclosure is objected to because of the following informalities:

- On page 2, line 14, "ends. The" should read --ends, the--
- On page 2, line 21, "complex" should read --the complexity of the--
- On page 9, lines 15 and 16, "called as an" should read --called an--
- On page 10, line 14, "SN18" should read --SN19--
- On page 10, line 20, "reaches to the" should read --reaches the--
- On page 11, line 7, "further winding cycle" should read --a further winding cycle--
- On page 11, lines 24 and 25, it is unclear what is meant by "which is only stacked the conductors"
- On page 15, line 26, "turn coil" should read --turn coils--
- On page 17, line 2, "connected" should read --connects--
- On page 17, line 24, "accommodates" should read --accommodate--

Appropriate correction is required. The applicant is urged to carefully read the specification and correct any remaining misspellings and grammatical errors which may not have been identified by the examiner.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1, 2, 4, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sadier (US4864715) in view of Mihalko (US5197180).

Sadier discloses a method of manufacturing a rotary electric machine, the rotary electric machine having a stator core (stack of sheets 4 in Fig. 16) with a plurality of slots and a belt-shaped coil mounted on the stator core by inserting the conductors into the slots in a disorderly fashion (see line 55 of col. 9 to line 50 of col. 10). Manipulator 55 and mechanism 61 in Fig. 16 are used to insert belt-shaped coil 8 into corresponding stator slots, this being done in a disorderly fashion, i.e. the wires are pushed into the slots with there being an orderly placement of the conductors into the slots.

Sadier does not disclose forming the belt-shaped coil by winding conductors on a tool to form a belt shaped coil, drawing the tool out from the belt shaped coil, and curving the belt-shaped coil into a ring.

Mihalko teaches these exact steps, i.e. forming a winding to be inserted in a stator of an electric machine by winding conductors over each other on a tool (mandrel 58 in Fig. 2) to form a belt shaped coil (see coil in Figs. 2, 4, 5 and final coil in Fig. 7;),

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drawing the tool out from the belt shaped coil (see col. 6, lns. 60-65), and curving the belt-shaped coil into a ring (see Fig. 8). Also see the abstract.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the method of Sadier, in view of the teachings of Mihalko, by forming a winding to be inserted in the slots of a stator by winding conductors on a tool to form a belt-shaped coil having an appropriate conductor pattern, drawing the tool from the coil, and forming the coil into a ring, in order to simplify and expedite a winding process as compared to say manually winding the stator.

1. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sadier and Mihalko, as applied to claim 1 above, and further in view of Huang et al. (US5592731).

Sadier and Mihalko disclose the same invention as the applicant except for inserting the belt-shaped coil into stator slots of an unwound stator (i.e. not having a ring shape), and then forming the stator together with the coil into a ring shape.

Huang et al. teach winding segments of a stator with wire when the segments are arranged linearly, i.e. prior to forming the stator into a ring (see abstract; see Fig. 6 for example)

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to insert a belt-shaped coil into slots of a stator while the stator is still in linear form, instead of first forming the coil into a ring prior to insertion into a ring-shaped stator, since it is much easier to insert coils into slots if the stator is not yet in ring form.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Livius R. Cazan whose telephone number is (571) 272-8032. The examiner can normally be reached on 7:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on (571)272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LRC 04/12/2006



**PETER VO  
SUPERVISORY PATENT EXAMINER  
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